

REMARKS

Claims 1-20 are presented for examination. Claims 1, 9, and 19 have been amended. No new matter has been entered.

In the Office Action mailed March 24, 2006, the Examiner rejected claims 1-20 as anticipated by U.S. Patent No. 6,597,592 ("Carsten"). The Applicant disagrees with the basis of the rejections and requests reconsideration and further examination of the claims.

Carsten describes a controlled rectifier based on a first bipolar transistor (BJT) 1 controlled by two other BJTs 2 and 3. As shown in Figures 9-16, the BJTs 2 and 3 are connected in series between the collector and the emitter of BJT 1. The collectors of BJTs 2 and 3 are connected at the midpoint of the series to the base of BJT 1. In all of the embodiments of Carsten, the emitter of BJT 1 is grounded. (Figures 9-23; Column 10, lines 31-36).

In contrast according to the preferred embodiments of the present invention, the output terminal of the bipolar transistor is coupled to a potential voltage higher than ground potential, not to ground. Carsten does not disclose, teach or suggest a rectifier as forth in the claims. Claim 1 is directed to a controllable rectifying element that includes a bipolar transistor having a current input terminal connected to a control terminal by a first switch, the current input terminal coupled to a first potential voltage higher than ground potential, and having a current output terminal directly connected to the control terminal by a second switch, the current output terminal coupled to a second potential voltage higher than ground potential. As shown in Figure 2, the preferred embodiments of the present invention will not operate with the output terminal directly connected to ground.

In view of the foregoing, the Applicant respectfully submits that claim 1 is allowable over Carsten. Dependent claims 2-8 are also allowable for the features recited therein as well as for the reasons why claim 1 is allowable.

Claim 9 is directed to a rectifying circuit including, *inter alia*, a supply transistor having an input terminal, an output terminal and a control terminal, the input terminal coupled to a first potential voltage higher than ground potential and the output terminal coupled to a second potential voltage higher than ground potential. As discussed above, unlike Carsten that grounds the emitter of BJT 1, the output terminal and the input terminal of the rectifying circuit of claim

9 are not grounded. For the foregoing reasons, the Applicant respectfully submits that claim 9 is allowable over Carsten. Dependent claims 10-18 are also allowable for the features recited therein as well as for the reasons why claim 9 is allowable.

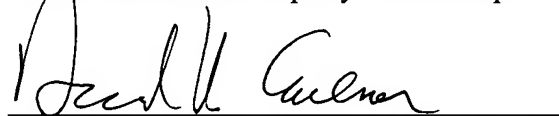
Claim 19 is also directed to a rectifying circuit including, *inter alia*, a semiconductor substrate and a power supply transistor formed in the semiconductor substrate, the power supply transistor having an input terminal, an output terminal and a control terminal, the input terminal coupled to a first potential voltage higher than ground potential and the output terminal coupled to a second potential voltage higher than ground potential. For the reasons discussed above, the Applicant respectfully submits that claim 19 is allowable over Carsten. Dependent claim 20 is also allowable for the features recited therein as well as for the reasons why claim 19 is allowable.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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